Carbon Nanotechnologies Inc. (CNI) Announces the Allowance of a U.S. Patent for Contacting Single-Wall Carbon Nanotubes With Catalytic Metal

- Provides patent coverage for applications where single-wall carbon nanotubes function as a catalyst support
- Along with recently-allowed coverage for doping single-wall carbon nanotubes with non-carbon atoms, establishes a strong patent position for new fuel cell electrodes

Houston, TX, USA - July 27, 2004 - Carbon Nanotechnologies, Inc (CNI) announced today the allowance of a U.S. Patent for contacting single-wall carbon nanotubes with catalytic metal and then activating the catalyst. The technology provides CNI with important coverage for the use of single-wall carbon nanotubes in applications where they support metal catalysts, such as in fuel cell electrodes. This technology is part of the intellectual property developed by Nobel-Prize winning scientist Dr. Richard Smalley and licensed exclusively to CNI by Rice University in 2001.

“This technology, along with CNI’s patent coverage related to doping of single-wall carbon nanotubes provides CNI an important position in fuel cells where single-wall carbon nanotubes have been demonstrated to show substantial performance improvement in achieving current density,” said Dr. Smalley.

Carbon nanotubes are superior materials for electrodes and electro-catalyst supports. The nanotubes’ high electrical conductivity, chemical robustness and high surface area work together to provide substantially enhanced performance for electrochemical devices. This is especially important since there is now a virtual explosion in the use of portable electronics for the transfer and manipulation of voice, video and data. Fuel cells may be the only technology with the potential to create adequate volumetric energy densities to meet this need. Electrodes based on single-wall carbon nanotubes are expected to play a major role in this development.

CNI also recently received allowance of a U.S. patent with composition of matter coverage for end-derivatized single-wall carbon nanotubes that are doped with non-carbon atoms. “With these 2 allowed patents, CNI has fundamental coverage for fuel cells and other electrochemical applications, which could speed the development of fuel cells for portable electronics,” said Bob Gower, President and CEO of CNI.

Single-wall carbon nanotubes are an example of a nanotechnology that is now reaching the commercial arena. These nanostructures comprise large molecules of carbon, cylindrical in form and are about 1 nanometer (billionth of a meter) in diameter and hundreds to thousands of nanometers long. As individual molecules, single-wall carbon nanotubes have a tensile strength that is 100 times that of high-strength steel and about one-sixth the density of steel. They conduct electricity and heat extremely well, and many believe that they represent the next revolution in polymer technology.

CNI has over 100 patents and patent applications with a total of about 5000 claims in various stages of prosecution. Twenty-five of these with a total of about 900 claims

have been issued or allowed. The portfolio of 100 patents and applications includes about 650 composition of matter claims, over 40 of which have been issued or allowed thus far.

CNI has several pilot plants to produce single-wall and other small-diameter carbon nanotubes in operation at its location in west Houston. The company is nearing completion of a facility with a design capacity of 100 pounds per day.

The company currently has close to 450 customers worldwide and has an exclusive relationship with Sumitomo Corporation for marketing and distribution of CNI products in Japan.

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